

AMENDMENTS TO THE CLAIMS

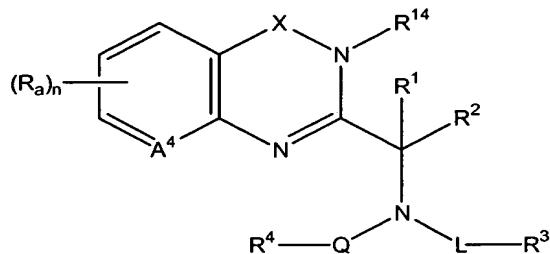
Please cancel claims 156-159, 162-170, 173-190, 193-197, and 202 without prejudice.

Please amend claims 136, 138, 139, and 154 as shown below.

Please add new claims 205-226 as shown in the following list of claims:

1.-135. (Cancelled).

136. (Currently Amended) A compound having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂-;

R¹ and R² are members independently selected from the group consisting of H and (C₁-C₄)alkyl;

R³ is a member selected from the group consisting of hydroxy, (C₁-C₈)alkoxy, amino, (C₁-C₈)alkylamino, di(C₁-C₈)alkylamino, (C₂-C₈)heteroalkyl, (C₃-C₉)heterocyclyl, (C₁-C₈)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR⁹R¹⁰ and -CO₂R¹¹;

R⁴ is a member selected from the group consisting of (C₁-C₂₀)alkyl, (C₂-C₂₀)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₆)heteroalkyl, aryl(C₁-C₆)alkyl and aryl(C₂-C₆)heteroalkyl;

each R⁹, R¹⁰ and R¹¹ is independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₈)heteroalkyl, aryl(C₁-C₈)alkyl and aryl(C₂-C₈)heteroalkyl;

R¹⁴ is a substituted or unsubstituted aryl or heteroaryl member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -C(O)-;

L is (C₁-C₈)alkylene;

the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO₂, -CO₂R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR"C(O)R', -NR"C(O)₂R', -NR'-C(O)NR"R'', -NH-C(NH₂)=NH, -NR'C(NH₂)=NH, -NH-C(NH₂)=NR', -S(O)R', -S(O)₂R', -S(O)₂NR'R'', -N₃, -CH(Ph)₂, perfluoro(C₁-C₄)alkoxy and perfluoro(C₁-C₄)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C₁-C₄)alkyl and (unsubstituted aryl)oxy-(C₁-C₄)alkyl.

137. (Previously Added) The compound of Claim 136, wherein X is -C(O)-.

138. (Currently Amended) The compound of Claim 136, wherein R¹⁴ is a substituted or unsubstituted phenyl. ~~member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl.~~

139. (Currently Amended) The compound of Claim 137, wherein R¹⁴ is a substituted or unsubstituted phenyl. ~~member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl.~~

140. (Previously Added) The compound of Claim 136, wherein R³ is (C₁-C₈)acylamino.

141. (Previously Added) The compound of Claim 136, wherein R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.

142. (Previously Added) The compound of Claim 136, wherein R¹⁴ is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

143. (Previously Added) The compound of Claim 136, wherein R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

144. (Previously Added) The compound of Claim 136, wherein R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl, and R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

145. (Previously Added) The compound of Claim 136, wherein R¹ is selected from the group consisting of methyl, ethyl and propyl, and R² is hydrogen.

146. (Previously Added) The compound of Claim 136, wherein R¹ and R² are each methyl.

147. (Previously Added) The compound of Claim 136, wherein L is (C₁-C₄)alkylene.

148. (Previously Added) The compound of Claim 136, wherein R³ is a member selected from the group consisting of (C₁-C₈)alkoxy, (C₃-C₉)heterocyclyl and heteroaryl.

149. (Previously Added) The compound of Claim 136, wherein R³ is heteroaryl.

150. (Previously Added) The compound of Claim 136, wherein R³ is heteroaryl and R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.

151. (Previously Added) The compound of Claim 136, wherein R³ is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl.

152. (Previously Added) The compound of Claim 136, wherein R¹ and R² are each independently selected from the group consisting of H, methyl and ethyl; R¹⁴ is phenyl; L is methylene, ethylene or propylene; R³ is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl; and R⁴ is substituted or

unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.

153. (Previously Added) A pharmaceutical composition comprising the compound of Claim 136 and a pharmaceutically acceptable carrier or diluent.

154. (Currently Amended) A method of treating psoriasis, rheumatoid arthritis, inflammatory bowel disease, asthma, organ transplant conditions, or multiple sclerosis ~~an inflammatory or immune condition or disease~~ in a subject, said method comprising administering to a subject in need of such treatment a therapeutically effective amount of the compound of Claim 136.

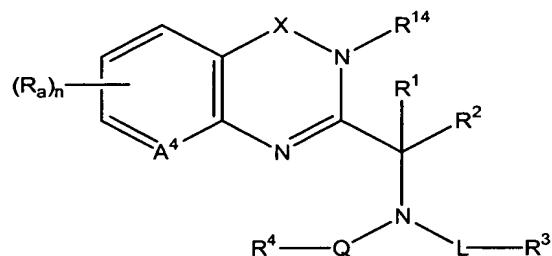
155. (Previously Added) The method of Claim 154, wherein said compound is administered orally, parenterally or topically.

156.-202. (Canceled).

203. (Previously Added) A method for the modulation of CXCR3 function in a cell, comprising contacting said cell with a compound of Claim 136.

204. (Previously Added) A method for the modulation of CXCR3 function, comprising contacting a CXCR3 protein with a compound of Claim 136.

205. (New) A compound having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂- ;

R¹ and R² are members independently selected from the group consisting of H and (C₁-C₄)alkyl;

R^3 is a member selected from the group consisting of hydroxy, $(C_1-C_8)alkoxy$, amino, $(C_1-C_8)alkylamino$, di $(C_1-C_8)alkylamino$, $(C_2-C_8)heteroalkyl$, $(C_3-C_9)heterocyclyl$, $(C_1-C_8)acylamino$, amidino, guanidino, ureido, cyano, heteroaryl, $-CONR^9R^{10}$ and $-CO_2R^{11}$;

R^4 is a member selected from the group consisting of $(C_1-C_{20})alkyl$, $(C_2-C_{20})heteroalkyl$, heteroaryl, aryl, heteroaryl $(C_1-C_6)alkyl$, heteroaryl $(C_2-C_6)heteroalkyl$, aryl $(C_1-C_6)alkyl$ and aryl $(C_2-C_6)heteroalkyl$;

each R^9 , R^{10} and R^{11} is independently selected from the group consisting of H, $(C_1-C_8)alkyl$, $(C_2-C_8)heteroalkyl$, heteroaryl, aryl, heteroaryl $(C_1-C_6)alkyl$, heteroaryl $(C_2-C_8)heteroalkyl$, aryl $(C_1-C_8)alkyl$ and aryl $(C_2-C_8)heteroalkyl$;

R^{14} is substituted or unsubstituted aryl or heteroaryl;

Q is $-C(O)-$;

L is $(C_1-C_8)alkylene$;

the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, $-OR'$, $-OC(O)R'$, $-NR'R''$, $-SR'$, $-R'$, $-CN$, $-NO_2$, $-CO_2R'$, $-CONR'R''$, $-C(O)R'$, $-OC(O)NR'R''$, $-NR''C(O)R'$, $-NR''C(O)_2R'$, $-NR'-C(O)NR''R''$, $-NH-C(NH_2)=NH$, $-NR'C(NH_2)=NH$, $-NH-C(NH_2)=NR'$, $-S(O)R'$, $-S(O)_2R'$, $-S(O)_2NR'R''$, $-N_3$, $-CH(Ph)_2$, perfluoro $(C_1-C_4)alkoxy$ and perfluoro $(C_1-C_4)alkyl$, wherein R', R'' and R''' are each independently selected from the group consisting of H, $(C_1-C_8)alkyl$, $(C_2-C_8)heteroalkyl$, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)- $(C_1-C_4)alkyl$ and (unsubstituted aryl)oxy- $(C_1-C_4)alkyl$.

206. (New) The compound of Claim 205, wherein X is $-C(O)-$.

207. (New) The pharmaceutical composition of Claim 153, wherein X is $-C(O)-$.

208. (New) The pharmaceutical composition of Claim 153, wherein R^{14} is a substituted or unsubstituted phenyl.

209. (New) The pharmaceutical composition of Claim 153, wherein R^3 is $(C_1-C_8)acylamino$.

210. (New) The pharmaceutical composition of Claim 153, wherein R^4 is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo $(C_1-C_4)alkyl$, halo $(C_1-C_4)alkoxy$, cyano, nitro and phenyl.

211. (New) The pharmaceutical composition of Claim 153, wherein R¹⁴ is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

212. (New) The pharmaceutical composition of Claim 153, wherein R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

213. (New) The pharmaceutical composition of Claim 153, wherein R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl, and R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

214. (New) The pharmaceutical composition of Claim 153, wherein R¹ is selected from the group consisting of methyl, ethyl and propyl, and R² is hydrogen.

215. (New) The pharmaceutical composition of Claim 153, wherein L is (C₁-C₄)alkylene.

216. (New) The pharmaceutical composition of Claim 153, wherein X is -C(O)-; R¹ and R² are each independently selected from the group consisting of H, methyl and ethyl; R¹⁴ is selected from the group consisting of substituted and unsubstituted phenyl; L is methylene, ethylene or propylene; R³ is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl; and R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.

217. (New) The method of Claim 154, wherein X is -C(O)-.

218. (New) The method of Claim 154, wherein R¹⁴ is a substituted or unsubstituted phenyl.

219. (New) The method of Claim 154, wherein R³ is (C₁-C₈)acylamino.

220. (New) The method of Claim 154, wherein R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.

221. (New) The method of Claim 154, wherein R¹⁴ is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

223. (New) The method of Claim 154, wherein R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl, and R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

224. (New) The method of Claim 154, wherein R¹ is selected from the group consisting of methyl, ethyl and propyl, and R² is hydrogen.

225. (New) The method of Claim 154, wherein L is (C₁-C₄)alkylene.

226. (New) The method of Claim 154, wherein X is -C(O)-; R¹ and R² are each independently selected from the group consisting of H, methyl and ethyl; R¹⁴ is selected from the group consisting of substituted and unsubstituted phenyl; L is methylene, ethylene or propylene; R³ is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl; and R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.